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ABSTRACT

This report provides information about the performance of 1998 graduating seniors nationwide who took the ACT Assessment as sophomores, juniors, or seniors. Caution in applying these results is advised because these ACT-tested seniors may not be representative of the total population of graduating seniors. Information is provided according to the level of high school coursework completed. Average scores are reported for students who reported completing a core high school program of recommended courses and for students who did not complete a core program. Core or more is defined as 4 years of English or more, 3 or more years of mathematics, 3 or more years of social studies, and 3 or more years of natural sciences. In general, students who complete a core curriculum tend to earn higher average scores (average Composite score of 22.1) than students who do not complete core coursework (average Composite score of 19.3). This association holds true across racial and ethnic groups. Tables present trends in ACT composite scores. African American and Asian American scores have remained relatively stable over the last 5 years, but American Indian/Alaskan Native scores have steadily increased, from 18.5 to 19.0, and Caucasian American scores have increased from 21.4 to 21.7. Mexican American and Puerto Rican/Cuban/Other Hispanic scores have varied as the size of the tested group has increased or declined. (Contains seven tables.) (SLD)

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ED 424 305

A C T A S S E S S M E N T

ACT Assessment

1 9 9 8 R E S U L T S

Summary Report

National

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ACT ASSESSMENT RESULTS

National
1998

This report provides information about the performance of 1998 graduating seniors nationwide who took the ACT Assessment as sophomores, juniors or seniors. As you review and interpret the information provided, please keep the following in mind:

- ACT-tested seniors may not be representative of the total population of graduating seniors.

- This report provides selected information about the nation's ACT-tested graduating seniors. For more details, please refer to the 1998 national High School Profile Report.

Average ACT Scores

National
1998

To help policy-makers gain a better perspective on the association between coursework taken in high school and performance on the ACT Assessment, this report provides information about the graduating class according to level of high school coursework completed. Average scores are reported for 1998 graduating seniors who reported completing a core high school program (a **core or more** program is defined as a typical college preparatory program) and for those who reported not completing a high school core program. (Refer to following page).

The academic preparation a student receives in high school correlates with success in college. ACT research indicates that students who prepare academically by taking a core high school program consistently score higher on the ACT Assessment than those who do not. These same students also earn better grades in college. These facts underscore the value of a strong basic program of study in high school.

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Levels of High School Coursework

Core or More

Core or more is defined as a typical college preparatory program including:

- **English (four years or more)**

  One year credit each for English 9, English 10, English 11, English 12

- **Mathematics (three years or more)**

  One year credit each for Algebra 1, Algebra II, Geometry
  One-half year credit each for Trigonometry, Calculus (not Pre-Calculus), other Math courses beyond Algebra II, Computer Math/Computer Science

- **Social Studies (three years or more)**

  One year credit each for American History, World History, American Government
  One-half year credit each for Economics, Geography, Psychology, other History (European, State, etc.)

- **Natural Sciences (three years or more)**

  One year credit each for General/Physical/Earth Science, Biology, Chemistry, Physics

Less Than Core

Less than core refers to any high school program consisting of fewer courses than those included in core or more.

Average ACT test scores in English, Mathematics, Reading, Science Reasoning, and Composite for 1998 seniors who completed a core curriculum and those who did not are shown in Tables 1 and 2. In general, students who complete core coursework tend to earn higher average scores than students who do not complete core coursework. As Table 2 indicates, this association holds true across racial-ethnic groups. Table 3 shows that regardless of ethnic background, the average Composite score for students who completed core coursework has been consistently higher over the past five years than the average Composite scores of those who did not.

Table 1
Average ACT Scores
By Level of High School Coursework

	Core or More					Less Than Core				
Reference Group	**E**	**M**	**R**	**SR**	**C**	**E**	**M**	**R**	**SR**	**C**
National	21.5	22.0	22.4	22.0	22.1	18.6	18.9	19.7	19.6	19.3

Table 2
Average ACT Scores
By Level of High School Coursework and Racial-Ethnic Group

	Core or More					Less Than Core				
National Reference Group	**E**	**M**	**R**	**SR**	**C**	**E**	**M**	**R**	**SR**	**C**
African-Amer/Black	17.5	17.7	18.1	18.0	17.9	15.1	15.8	16.1	16.4	16.0
Amer Ind/Alas. Nat.	19.7	20.0	20.8	20.7	20.4	16.7	17.1	18.1	18.3	17.7
Caucasian-Amer.	22.2	22.5	23.1	22.6	22.7	19.4	19.4	20.4	20.3	20.0
Mexican-Amer/Chi.	18.7	19.8	19.7	19.7	19.6	16.2	17.1	17.4	17.7	17.2
Asian-Amer/Pac.	21.3	24.2	22.1	22.2	22.6	18.6	21.4	19.3	20.1	20.0
P.R./Cuban/Oth.	19.9	20.9	21.1	20.6	20.7	16.9	17.8	18.1	18.3	17.9

Table 3
Trends in Average ACT Composite Scores Across Five Years
By Level of High School Coursework and Racial-Ethnic Group

National Reference Group	Core or More		Less Than Core	
	N	Composite	N	Composite
All Graduates				
1994	478885	22.0	359974	19.1
1995	529146	22.0	360925	19.1
1996	542136	22.0	354733	19.2
1997	566141	22.1	361947	19.3
1998	606406	22.1	354306	19.3
African-American/Black				
1994	41533	18.0	39275	16.0
1995	48097	18.0	40099	15.9
1996	48321	17.9	38546	15.9
1997	50100	17.9	39696	16.0
1998	56544	17.9	41019	16.0
American Indian/Alaskan Native				
1994	4995	20.0	5533	17.3
1995	5398	20.1	5509	17.4
1996	5655	20.2	5419	17.7
1997	5685	20.4	5414	17.6
1998	5587	20.4	4903	17.7
Caucasian-American/White				
1994	356512	22.6	260155	19.8
1995	388508	22.6	257159	19.8
1996	398962	22.7	251375	19.9
1997	408851	22.8	250763	20.0
1998	444461	22.7	249092	20.0
Mexican-American/Chicano				
1994	15411	19.6	13918	17.1
1995	13435	19.8	10801	17.2
1996	11753	19.8	9438	17.4
1997	11875	19.9	9475	17.4
1998	19028	19.6	14541	17.2
Asian-American/Pacific Islander				
1994	17686	22.5	7952	19.9
1995	19237	22.4	7989	19.5
1996	19685	22.4	7676	19.7
1997	20201	22.5	7834	19.8
1998	22074	22.6	7886	20.0
Puerto Rican/Cuban/Other Hispanic				
1994	8685	20.5	5950	17.6
1995	13585	19.9	9812	17.2
1996	14838	20.0	10462	17.4
1997	15693	20.1	10615	17.4
1998	10732	20.7	5893	17.9

The data in Table 4 present the relationship between average ACT Composite scores and patterns of high school coursework across racial-ethnic groups **and** annual family income levels within each group.

Table 4
Average ACT Composite Scores
By Level of High School Coursework, Racial-Ethnic Group
And Annual Family Income

1998	Annual Family Income					
National Reference Group	**Less than $18,000**		**$18,000-$35,999**		**$36,000 or more**	
	N	**Composite**	**N**	**Composite**	**N**	**Composite**
All Graduates						
Total Group	92562	18.5	217121	20.0	530981	22.0
Core	48614	19.5	126593	21.0	354544	22.8
Less than Core	42584	17.3	88368	18.5	172714	20.2
African-American/Black						
Total Group	25328	16.2	32779	16.9	27521	18.3
Core	13353	16.9	18804	17.6	17582	19.0
Less than Core	11708	15.4	13653	15.9	9683	17.0
American Indian/Alaskan Native						
Total Group	1979	17.6	3385	18.5	4256	20.3
Core	831	19.1	1688	19.8	2481	21.4
Less than Core	1034	16.6	1589	17.4	1693	18.8
Caucasian-American/White						
Total Group	41771	20.2	140537	20.9	432125	22.2
Core	21842	21.4	82195	22.0	289468	23.1
Less than Core	19561	18.7	57388	19.3	140216	20.5
Mexican-American/Chicano						
Total Group	7616	17.1	11198	18.2	11589	20.0
Core	3881	18.1	6132	19.1	7228	20.8
Less than Core	3685	16.1	4995	17.0	4304	18.5
Asian-American/Pacific Islander						
Total Group	4578	18.9	7656	20.6	14798	23.5
Core	3026	19.6	5431	21.3	11270	24.0
Less than Core	1472	17.3	2083	19.0	3332	21.8
Puerto Rican/Cuban/Other Hispanic						
Total Group	2923	17.6	5009	19.0	7169	21.1
Core	1527	18.7	3030	19.9	4977	21.9
Less than Core	1248	16.4	1847	17.5	2069	19.2

Each year ACT collects freshman course grades from hundreds of colleges and universities. Research has shown ACT-tested graduates typically have at least a 50 percent chance of receiving at least a "B" in the courses listed if they obtain the identified ACT score value or higher. The columns in the right side of the table present the percentages of ACT-tested graduates that earned a score at or above the typical cutoff score. For example, of those students who had core or more coursework, 83% had an ACT English score at or above 17.

Table 5
Summary of Course Placement Cutoff Scores

Course Type	ACT Assessment Test Variable	Typical Cutoff Score	Percent At or Above The Typical Cutoff Score	
			Those with Core Coursework	Those With Less than Core Coursework
English				
Standard Composition	English	17	83	63
Advanced Composition	English	20	64	40
Literature	English	21	56	33
Mathematics				
Elementary Algebra	Mathematics	19	70	43
Intermediate Algebra	Mathematics	22	49	24
College Algebra	Mathematics	23	43	20
Calculus	Mathematics	27	20	8
Science				
Chemistry	Science Reasoning	24	35	18
Physics	Science Reasoning	20	69	47

Academic success at specific colleges/universities depends on many factors, including the selectivity of the institution and the institution's grading practices. Based on the information presented above, the percentage of ACT-tested students who would likely receive at least a "B" in the identified courses is higher for those who completed the recommended core coursework. Students who earn ACT scores below those listed may need additional academic preparation to be successful in these typical college entry level courses.

Table 6 compares percentages of students choosing selected academic majors in 1994, 1996, and 1998. Overall the interest in most majors has been consistent during this period.

Table 6
Percentages Choosing Selected Majors
By Graduation Year and Gender

National Reference Group	Men	Women	Total
Business			
1994	14	13	13
1996	14	12	13
1998	14	11	12
Computer/Information Sciences			
1994	3	1	2
1996	4	1	3
1998	6	2	3
Education			
1994	5	12	9
1996	5	12	9
1998	5	13	10
Engineering			
1994	17	3	9
1996	17	3	9
1998	17	3	9
Health Professions			
1994	13	26	20
1996	13	27	21
1998	11	26	20

Table 7 presents the average ACT Composite scores for various racial-ethnic groups from 1994 to 1998. Trend information is provided for each reference group represented by 500 or more ACT-tested graduates each year. Over the five-year period, the national average composite score for all graduates has increased from 20.8 to 21.0. African-American and Asian-American scores have remained relatively stable. American Indian/Alaskan Native scores have steadily increased from 18.5 to 19.0 and Caucasian-American from 21.4 to 21.7. Mexican-American and Puerto Rican/Cuban/Other Hispanic scores have varied as the size of the tested group has increased or decreased.

Table 7
Trends in Average ACT Composite Scores*

National Reference Group	N	Composite
All Graduates		
1994	891714	20.8
1995	945369	20.8
1996	924663	20.9
1997	959301	21.0
1998	995039	21.0
African-American/Black		
1994	81806	17.0
1995	89155	17.1
1996	87630	17.0
1997	90617	17.1
1998	100537	17.1
American Indian/Alaskan Native		
1994	11026	18.5
1995	11361	18.6
1996	11580	18.8
1997	11509	19.0
1998	11132	19.0
Caucasian-American/White		
1994	623366	21.4
1995	650664	21.5
1996	654377	21.6
1997	663878	21.7
1998	707496	21.7

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Table 7
Trends in Average ACT Composite Scores*

National Reference Group	N	Composite
Mexican-American/Chicano		
1994	29558	18.4
1995	24431	18.6
1996	21345	18.7
1997	21511	18.8
1998	34617	18.5
Asian-American/Pacific Islander		
1994	26168	21.7
1995	27784	21.6
1996	27847	21.6
1997	28542	21.7
1998	30988	21.8
Puerto Rican/Cuban/Other Hispanic		
1994	15119	19.3
1995	24054	18.7
1996	25857	18.9
1997	26841	19.0
1998	17500	19.6

*All average scores are on the scale for the Enhanced ACT Assessment. Annual national trends in ACT scores beginning with 1969-70 are available on request.